

Near-miss: Incorrect length retaining screws fitted on divers helmet

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A Member has reported a case of incorrect length retaining screws being found fitted to an Ultrajewel 601 diver's helmet, exhaust valve cover assembly.

What happened?

This was discovered by vessel crew carrying out maintenance on a newly received 17C Ultrajewel 601 helmet. The jewel cover (Item 17, Part Number: DM022), retaining screws (Item 18, Part Number: FB240) had been cut down in length and as a result did not give the required thread engagement. The correct length of the screw was 35mm as indicated within the part description column.

Following the incident an inspection of the screws revealed that three of the four screws fitted had been cut back to varying lengths. The loss of thread certainly severely reduced the amount of thread available to satisfactorily clamp the exhaust valve cover assembly together. Loosening of the screws during use and the eventual separation of the jewel cover assembly could have caused a serious incident.

It is yet unknown how modified screws found their way into this location. All technicians maintaining diving equipment should be trained and competent personnel. Any technician who regularly maintains diving equipment will understand fully the importance of the jewel exhaust valve integrity during operation and will also be very familiar with the required grip range of the screws involved.

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Our Member drew the following lessons:

- Only use correct screws when maintaining life support equipment and as supplied by the equipment manufacturer.
- Ensure that any held stock of the screw is adequately controlled to prevent migration into other stocked item locations and that storage bins or bags are clearly marked with the manufacturer's part number.
- Only trained and competent personnel should be maintaining life support equipment.
- Never modify manufacturer supplied parts.

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